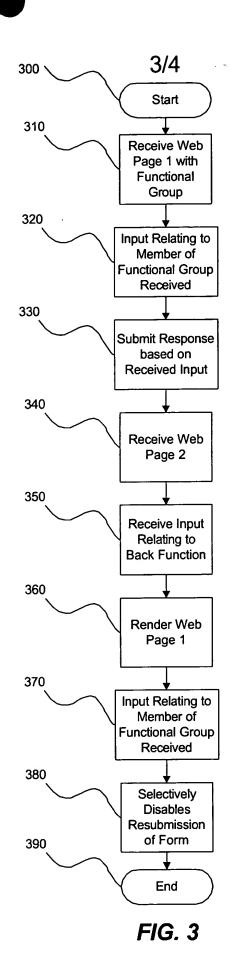


FIG. 2



```
_________
               PageHistory methods
               Description:
  5
                  definition of the PageHistory methods
          ______*/
       function PageHistory_setPageFlag(name, flag) {
               //variable used in the cookie: literal string with ' to escape the potential: inside of name
 10
               var namelit = "" + name + "":
               //set it in the cookie string
               //case in it is in pages already, then modify value in cookie
               if (!this.isNotInHistory(name)) {
                      var repl = new RegExp(namelit + ":" + "[^\\s]*\\s");
 15
                      debug(GenDebug, "this.cookie before", this.cookie);
                      debug(GenDebug, "repl", repl);
                      this.cookie = this.cookie.replace(repl, namelit + ":" + flag + " ");
                      debug(GenDebug, "this.cookie after", this.cookie);
               }
 20
               else {
                      //case cookie empty, create it
                      if (this.cookie == "") {
                              this.cookie = "{ " + namelit + ":" + flag + " }";
                      //else add it to the beginning
                      else {
                             this.cookie = "{ " + namelit + ":" + flag + ", " + this.cookie.substr(1);
                      this.size++;
                      debug(GenDebug, "this.size", this.size);
                      //case size > maxsize, remove lru = end
                      if (this.size > this.maxsize) {
                              debug(GenDebug, "this.cookie before size restraint", this.cookie);
                              this.cookie = this.cookie.slice(0, this.cookie.lastIndexOf(",")) + "}";
35
                              debug(GenDebug, "this.cookie after size restraint", this.cookie);
                      }
ĹŪ
Ü
               debug(GenDebug, "this.cookie end", this.cookie);
Ö
               //set it in the hashtable
 40
               this pages[name] = flag;
               //set the cookie
               setCookie("pageh", this.cookie);
       }
 45
       function PageHistory getPageFlag(name) {
               if (IsDef(this.pages[name])) return this.pages[name];
       function PageHistory_isNotInHistory(name) {
               if (IsUndef(this.pages[name])) return true;
 50
               return false:
       }
                  ______
               PageHistory()
 55
               Description:
```

```
definition of the PageHistory constructor.
                               The PageHistory object stores a mru/lru (most and least recently used) list of size
        maxSize pages for which you submitted a form
                               When you add a page and the list is full we discard Iru and add it as mru
                               Pages are characterized by a guid and a a flag
  5
                               The flag indicates if the page has already been submitted
                               This object has some methods that lets you add a page, update a flag for a page
        and get a flag from a page.
        10
        //no need to use prototypes since we use only one instance of the object
        function PageHistory(maxsize) {
               //define the member variables
               this.maxsize = maxsize:
 15
               this.size = 0;
               //we store a js expression defining an associative array in the cookie
               //we instantiate the array for quick lookups in the js object pages
               //we keep the cookie to manage the lru/mru for serialization
               //this makes the whole thing much faster: remove beginning and add to the end are very easy ops
 20
        on strings
               //and we don't have to loop to serialize/deserialize
               this.cookie = getCookie("pageh");
O
               debug(GenDebug, "this.cookie", this.cookie);
               if (this.cookie == "") {
                       this.pages = new Object();
##
##
#30
               }
               else {
                       this.pages = eval("bozo = " + this.cookie);
                       this.size = this.cookie.split(',').length;
                       debug(GenDebug, "this.size", this.size);
               //define the methods
투표
               this.setPageFlag = PageHistory setPageFlag;
               this.getPageFlag = PageHistory getPageFlag;
               this.isNotInHistory = PageHistory_isNotInHistory;
```

debug(GenDebug, "pages", dumpObject(this.pages));

var pageHistory = new PageHistory(20);

}

40

```
______
             allowSubmit(name)
             Description:
                checks if a page is allowed to be submitted. If it is allowed to do so, returns true and sets its
  5
       flag to 0 so that it won't be allowed again.
                           to be called on a onSubmit handler
       _____*/
 10
       function allowSubmit(name, confirmFlag) {
         uKey = pageHistory.getPageFlag(name)
             debug(GenDebug, "uKey", uKey);
         if (uKey == "1") {
                    pageHistory.setPageFlag(name, "0");
 15
                    return true;
         } else {
             if (confirmFlag) {
               return confirm("This form has previously been submitted. Submitting again may result in an
       error. Do you want to submit?");
 20
             } else {
               alert("This Form has previously been submited. It cannot be submited again.");
                return false:
Ö
        }
-25
       }
LÚ
La
             putPageInHistory(name)
4.1
             Description:
                 puts a page in history if it is not there, with a flag allowing it to be submitted.
                           To be called at the beginning of your page
ĻŁ
       35
       function putPageInHistory(name) {
             debug(GenDebug, "pageHistory.isNotInHistory(name)", pageHistory.isNotInHistory(name));
Cū
ij
             if (pageHistory.isNotInHistory(name)) {
                           pageHistory.setPageFlag(name, "1");
ā
             }
 40
       }
       function dumpObject(obj) {
             var dump = "";
             for (var i in obj) dump += i + "=" + obj[i] + "\n";
 45
             return dump;
       }
```

```
_______
              getObject()
              Description: convert object name string or object reference into a valid object reference
             for both browsers: this is a reference on which you can set some style attributes
  5
       function getObject(obj) {
              var theObj;
              if (typeof obj == "string") {
 10
                    var iniObj;
                    if (isNav6) {
                           iniObj = document.getElementById(obj);
                    }
                    else {
 15
                           iniObj = eval("document." + coll + obj);
                    }
                    if (IsUndef(iniObj)) {
                           return "undefined";
 20
                    }
                    if (isNav4) {
ij
                           return iniObj;
35
35
30
30
                    }
                    else {
                    // in the IE or NS6 case the iniObj.style object may be undefined
                           if (IsDef(iniObj.style)) {
                                  return iniObj.style;
                           else {
                                  return "undefined";
ĻΔ
                    }
ſIJ
              }
35
              else {
CO
                     theObj = obj;
return theObj;
Ö
       }
```

40

```
getObjectRef()
             Description: convert object name string or object reference into a valid object reference
             for both browsers, without the style in IE: this is the real object reference
 5
             this function is adapted from Danny Goodman's "Dynamic Html: The Definitive Reference"
             http://www.amazon.com/exec/obidos/ASIN/1565924940/qid%3D963012863/002-0174003-
     8509633
10
     function getObjectRef(obj) {//alert("getRef "+obj);
             var theObj;
             if (typeof obj == "string") {
15
                    var iniObj = eval("document." + col! + obj);
     //alert("getRef "+iniObj);
                    if (IsUndef(iniObj)) {
                           return "undefined1";
                    }
20
                           return iniObj;
                    else {
                    theObj = obj;
                    }
            return theObj;
     }
```

ÇĢ

```
FUNCTION:
                     IsUndef
       INPUT:
                     val - the value to be tested
  5
                    true, if the value is undefined
       RETURN:
               false, otherwise.
       PLATFORMS: Netscape Navigator 3.01 and higher,
 10
                        Microsoft Internet Explorer 3.02 and higher,
                        Netscape Enterprise Server 3.0.
                        Microsoft IIS/ASP 3.0.
       function IsUndef( val ) {
 15
           var isValid = false;
           if (val+"" == "undefined")
               isValid = true;
           return isValid;
 20
       } // end IsUndef
       function IsDef( val ) {
O
           return !IsUndef(val);
       } // end IsUndef
LЦ
        * This function
              checks if the form is allowed to be submitted.
              if yes, it sets the action, then calls form.submit()
        Usage:
         <code>
              <a href="Javascript:submitForm('/iMM/somefile.jsp', 'myForm', 'someUniqueKey', true)">
۲Ď
         </code>
Ö
       * 
 40
       function submitForm(action, formName, key, confirmFlag) {
         //we put a provision here to let the users of this function not provide the last argument, which the
       ndefaults to true
         if (IsUndef(confirmFlag)) {
              confirmFlag = true;
 45
         if (allowSubmit(key, confirmFlag)) {
              debug(GenDebug, "formName", formName);
              eval("document." + formName + ".action=\"" + action + "\"");
              eval("document." + formName + ".submit()");
 50
       }
```